

**REMARKS**

Claims 1, 7, 9, 11-21, and 46-50 are pending in the application. Claims 1, 4-9, 12-16 and 20 were rejected. New claims 46-50 have been added herein. Claims 1, 7, 9, 11-13, 17, 18, and 21 are amended herein, and claims 4-6, 8, 10 and 31-40 are canceled. Applicant notes with appreciation the provisional allowance of claims 10, 11, 17, 18, and 21 if rewritten into independent form including all of the limitations of the base claim and any intervening claims.

Claim 1 has been amended with the limitations of claim 10, which has been provisionally allowed, including intervening claims 4-6 and 8. Thus, claim 1 and the rejected claims depending thereupon are believed to be in a condition for allowance.

Claims 11, 17 and 21, which were provisionally allowed, have been amended into independent form including all the limitations of the base claim and any intervening claims. Thus, independent claims 11, 17 and 21 are believed to be in a condition for allowance.

Claim 18 has been provisionally allowed and provides limitations relating to a first puncturing element only. Therefore, claim 18 has been amended into independent form without features for a second puncturing element, and thus, is believed to still be patentable over the cited art and in a condition for allowance. In addition, the features relating to the second puncturing element have been added in new claims 46-50, which are believed to be allowable, as claims 46-50 depend upon claim 18 and add further limitations thereto.

Reconsideration of the application is respectfully requested.

**I. REJECTION OF CLAIMS 1, 4-5, 14-16 AND 19-20 UNDER 35 U.S.C. §103(a)**

Claims 1, 4-5, 14-16 and 19-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of U.S. Pub. No.

2002/0006119 (Steudle) and U.S. Patent No. 6,604,216 (Javerbring). Withdrawal of the rejection is respectfully requested for at least the following reasons.

Claim 1 has been amended into independent form including all the limitations of the base claim and any intervening claims, and thus, is believed to be in a condition for allowance. Claims 7, 9, 14-16 and 19-20 depend upon independent claim 1 and add further limitations thereto. Thus, claim 1 and claims 7, 9, 14-16 and 19-20 depending thereupon are also believed to be in a condition for allowance. Accordingly withdrawal of the rejection is respectfully requested.

## **II. REJECTION OF CLAIM 13 UNDER 35 U.S.C. §103(a)**

Claims 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Steudle, Javerbring, and U.S. Patent No. 7,092,455 (Choi). Withdrawal of the rejection is respectfully requested for at least the following reasons.

- 1. One of ordinary skill in the art would not be motivated to modify the teachings of AAPA in view of Steudle, Javerbring, and Choi with an interleaver configured to detect empty locations in a parallel input data stream coming from a puncturing device by using an indication signal transmitted by the puncturing device, as recited in claim 13.***

Independent claim 13, as amended, provides, inter alia, for an electronic transmitter device, which comprises a puncturing device that provides empty locations in an output data stream, and an interleaver. The interleaver is arranged downstream of the puncturing device, and detects the empty locations in the output data stream of the puncturing device by an indication signal output from the puncturing device, and does not include them in further data processing. It is respectfully submitted that one of ordinary skill in the art would not be motivated to modify AAPA in view of Steudle, Javerbring and Choi with these features.

The Office Action concedes that AAPA does not teach the features of an interleaver of claim 13, but states that Choi suggest to one of ordinary skill in the art to modify the AAPA with such features. The Office Action states that Choi teaches a

control signal indicative of a puncturing pattern for processing data signals at later stages (referring to Fig. 11: element 64 of Choi; Col. 8, ln. 43 to col. 9, ln. 5). The Office Action further states that it would be obvious for an interleaver to detect the empty locations in a parallel input data stream coming from a puncturing device, and not include them in further data processing. However, applicants respectfully disagree.

Choi teaches a control signal generator 64, which generates first and second control signals indicative of a puncturing pattern (see, col. 8, lns. 53-56). The puncturing pattern is, however, not indicated to subsequent processing stages as alleged in the Office Action, but is merely indicated to the puncturing unit 65 itself, which performs puncturing of the data according to the puncturing scheme indicated by signal generator 64 (see, col. 8, lns. 56-63; col. 9, lns. 24-30). ***Accordingly, Choi only teaches to indicate a puncturing scheme to a puncturing unit, which therein operates based on that puncturing scheme.*** However, this is reflective of any puncturing unit, which must know the puncturing scheme to apply, ***and does not indicate that a puncturing scheme is indicated to units further downstream of the puncturing device.*** In particular, Choi fails to suggest indicating a puncturing scheme to an interleaver, as recited in claim 13. For example, neither interleaver 63C (located upstream of unit 64 of Choi), nor de-interleaver 66B (located downstream of unit 64 of Choi) receive such an indication signal.

Further, the Office Action states that it would be obvious for an interleaver to detect empty locations in a parallel input data stream coming from a puncturing device, and would thereby not include them into further processing. However, it should be noted that the interleaver of Choi, and in general, does not analyze the incoming data stream, but rather applies a predetermined interleaving scheme to incoming data, irrespective of the data values or of gaps in the incoming data stream. Thus, the de-interleaver 66B in Choi, for example, operates independently of any upstream data processing, and in particular, operates independently from the puncturing scheme applied in unit 65. Consequently, Choi does not suggest to one of ordinary skill in the art to modify the AAPA in view of Steudle, Javerbring, and Choi **with an interleaver**

**configured to detect empty locations in a parallel input data stream coming from a puncturing device by using an indication signal transmitted by the puncturing device, as recited in claim 13.**

A modification of references is only appropriate when a motivation exists to do so. Motivation for modifying a reference can be found in the teachings of the prior art, in the nature of the problem to be solved, or in the general knowledge of those skilled in the art. In re Rouffet, 149 F.3d 1350, 1357 (Fed. Cir. 1998). However, such motivation can not be vague or conclusory, but instead must be **clear and particular**. In re Dembiczak, 175 F.3d 994, 999 (Fed. Cir. 1999). Further such motivation cannot be conclusory, but instead must be **apparent, and the analysis thereof should be made explicit**. In re Kahn, 441 F.3d 977, 986 (Fed Cir. 2006). It is respectfully submitted that the requisite motivation for modifying the art in accordance with the claimed invention does not exist, and therefore such a modification is not proper. For example, as stated above, Choi does not suggest an interleaver configured to detect empty locations in a parallel input data stream coming from a puncturing device by using an indication signal transmitted by the puncturing device, as recited in claim 13. Therefore, the goal of increasing throughput of a system while maintaining the benefits of high coding rates by integrating an interleaver of claim 13 has not been obvious to Choi, nor to one of ordinary skill in the art, together with the other cited art, without improper hindsight from the features recited in claim 13. Furthermore, the goal of increasing throughput of a system while maintaining benefits of high coding rates is vaguely general and conclusory, and as such, a more detailed reasoning for an obvious to modify rationale is requested if the rejection is to be maintained.

Withdrawal of the rejection is therefore respectfully requested.

**III. CONCLUSION**

For at least the above reasons, the claims currently under consideration are believed to be in condition for allowance.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should any fees be due as a result of the filing of this response, the Commissioner is hereby authorized to charge the Deposit Account Number 50-1733, LLP134WOUS.

Respectfully submitted,  
ESCHWEILER & ASSOCIATES, LLC

By /Thomas G. Eschweiler/  
Thomas G. Eschweiler  
Reg. No. 36,981

National City Bank Building  
629 Euclid Avenue, Suite 1000  
Cleveland, Ohio 44114  
(216) 502-0600